

FIELD TRIPS OF THE CLUB

TRIP OF JUNE 13 TO ECHO LAKE, N. J.

Seven members and three guests were present on this trip. The interesting associations along the railroad tracks and adjoining woods at Charlottesburg were studied and then the territory adjacent to Echo Lake. Kanouse Mountain was climbed and on its summit Dr. B. T. Butler gave a most interesting and instructive talk on the geology of the region, pointing out the remarkable character of the Green Pond conglomerate (Silurian age) which makes up this and one adjacent ridge, surrounded on all sides by ridges of Archean rock. Two hundred and forty species of wild plants were identified, including such interesting ones as *Comandra umbellata*, *Melampyrum lineare* var. *latifolium*, *Cynthia virginica*, *Gratiola neglecta*, *Gillenia trifoliata*, *Angelica villosa*, *Asclepias quadrifolia*, *Asplenium platyneuron*, *Cornus rugosa*, *C. foemina*, *Corylus cornuta*, *Callitriche Austini*, *Silene antirrhina*, *Equisetum sylvaticum*, *Cryptotaenia canadensis*, *Diervilla lonicera*, *Dioscorea villosa*, *Radicula palustris*, *Galium verum*, *Galium boreale*, *Panicum Bicknellii*, *Tragopogon pratensis*, and *Thalesia uniflora*.

H. N. MOLDENKE

TRIP OF JUNE 25 TO 28 TO GATLINBURG, TENN.

Friday morning, the group participating in the botanical foray were taken by Park officials from Gatlinburg to Greenbrier where the cars were left at the Great Smoky Mountains Hiking Club cabin. The trip for the day consisted of a nine mile hike over the new Greenbrier-Brushy Mountain Nature Trail which is being developed through the cooperation of the Botany Department of the University of Tennessee, the Hiking Club, and the Naturalist Service of the Park. This Nature Trail is unique in that it does not attempt to teach the names of plants and facts about them by labels, but has as its purpose the interpretation of the landscape as dynamic. This is attempted by a guidebook of about 25,000 words which, after laying a brief background in local geology, physiography, vegetation, plant geography, and ecology, describes eleven different vegetation types at stations along the trail. The trail itself is marked only by numbered posts, one at each station,

located in the best examples of the vegetation type. The structure and composition of the plant communities and their principal relationships are considered in successive sections of the guidebook. An appendix contains some scientific data relating to the region. As yet this trail is in the experimental stage. Those interested in it are appreciative of the comments given by the members of the botanical foray.

Some of the principal forest types along the trail represented by virgin stands are: hemlock ridge type, mixed cove hardwoods (undifferentiated climax), buckeye-basswood cove type, prealpine beech gap type, pine-heath, spruce, and fir. Different examples of the very interesting heath balds, or laurel slicks, were seen Brushy Mt. especially was of interest in this respect. These treeless communities dominated by shrubs of the heath family range from narrow ridge-top communities to broad mountain-top and upper slope stands. The shrubby growth ranges from low stands of *Leiophyllum* a foot or two high to almost impenetrable thickets of *Rhododendron* and *Kalmia* fifteen or twenty feet tall. The soil of these communities is always strongly podzolized and in some instances is covered by a thick layer of peat reaching a depth of three feet or more. This peat accumulation is all the more striking inasmuch as it develops not in basins but on steep slopes and sharp rocky ridges.

The region is rich in Ericales. *Kalmia latifolia* was found on hundreds of acres along the trail in excellent flowering condition. *Rhododendron catawbiense* was past its prime but some plants in fine flower were seen at higher elevations. (Some of the party who went later to Mt. LeConte found this magnificent shrub in its prime.) *Rhododendron carolinianum* was in flower on Brushy Mt. (4,911 ft. elev.) and *R. maximum* was coming into bloom along the streams at lower elevations. Other members of the order seen in flower were: *Arsenococcus* (*Lyonia*, *Xolisma*) *ligustrinus*, *Decachaena* (*Gaylussacia*) *ursina*, *Leiophyllum* (*Dendrium*) *Lyoni*, *Menziesia pilosa*, *Galax aphylla*, *Monotropa uniflora*, and *Azalea calendulacea*. The latter occurs in a multitude of colors from pale yellow to deep flame. Several members of the order which were observed, although not in flower, were *Decachaena baccata*, *Epigaea repens* and

Gaultheria procumbens in great abundance, and several species of *Cyanococcus* (*Vaccinium*).

Several interesting endemics were seen on the trip. Some of them were *Abies Fraseri*, *Magnolia Fraseri*, *Halesia monticola*, *Ilex Beadlei*, *Leiophyllum Lyoni*, *Senecio Rugelia*, *Solidago glomerata*, *Diphylleia cymosa*, *Trillium Vaseri*, and *Aster Curtisii*. Dr. Fulling and others familiar with the plants of more northern regions were interested to see several at or near their southermost extension. Among them may be mentioned *Picea rubens*, *Acer spicatum*, *Acer pennsylvanicum*, *Sambucus pubens*, *Rubus canadensis*, *Dryopteris dilatata*, *Lycopodium lucidulum*, *Oxalis montana*, *Circaea alpina*, and *Clintonia borealis*.

Some members of Friday's foray remained for the Trail Conference and other botanical excursions to Mt. Leconte (6,593 ft. elev.), Clingman's Dome (6,642 ft. elev.), and other points of interest. A somewhat fuller report may be sought in *CASTANEA* published by the Southern Appalachian Botanical Club.

STANLEY A. CAIN

TRIP OF JULY 11 TO INDIAN KILL BROOK, N. Y.

Of the outstanding features of the trip,—the rocky stream bed along Indian Kill was a gallery of lichens,—the profusion of mushrooms from *Amanita rubescens* to *Boletus fellus*, Russulas green and viscid red, *Strobilomyces strobilaceus*, and *Craterellus cornucopoides*, was remarkable considering the antecedent dry weather. Of the non-vascular plants, nothing more shall here be said. *Monarda fistulosa*, whose local distribution in New York, according to Taylor's Flora of the Vicinity of N. Y., is "Occasional on L. I. & S. I., decreasing up the Hudson valley to northern Westchester Co. unknown elsewhere"; was found repeatedly in large colonies in Orange Co. From the beauty of that *Monarda* and *Apocynum androsaemifolium* with large pure-white flowers we turned our attention to the homely *Rumex mexicanus*. In the woods we collected an *Hypopitys* whose dense pubescence on its ovary extended up the style and culminated in a patriarchal beard on the stigma and thus should be *H. lanuginosa* but had the lemon-yellow color of *H. ameri-*

cana. At lunch time we gathered a bouquet of *Carex lupulina*, *C. intumescens*, *C. lurida*, softened with the blue of *Campanula aparinoides*, *Myosotis laxa*, and *Veronica scutellata*. *Proserpinaca palustris* bloomed with *Penthorum sedoides*. It was amusing to contrast the different species of *Galium*:—*circaezans*, brown flowered *pilosum*, *Aparine*, *triflorum*, three-petaled *Claytonia*, *asprellum lanceolatum*. We did not bid au revoir to Southfields without examining a most gigantic hispid *Geum virginianum*. . . . Since we collected *Aureolaria* (*Dasystema*, *Gerardia*) for determination may I warn that the key of Britton or Gray lead to an error? and may I append a supplement adapted from Pennel to Britton's key?

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| 1. Plant very glandular | A. pedicularia. |
| 1. Plant not glandular | 2. |
| 2. Stem pubescent | 3. |
| 2. Stem glabrous | 4. |
| 3. Capsule pubescent | A. virginica. |
| 3. Capsule glabrous; westerly | A. grandiflora |
| 4. Stem green; lower leaves lanceolate widest below middle long acuminate | A. laevigata. |
| 4. Stem glaucous; lower leaves elliptic-ovate widest about middle not long acuminate. | A. flava. |

JOSEPH MONACHINO

TRIP OF JULY 25 TO COLD SPRING HARBOR,
LONG ISLAND

For a distance of about three miles, the group rambled on the foot-path along the shores of three large lakes, stopping for *Spirodela polyryza*, *Myriophyllum sp.*, *Impatiens pallida*, and what was probably *Utricularia clandestina*. Along First Lake, is a boggy stretch where an old railroad bed still remains. This yielded *Gratiola aurea*, *Lilium superbum*, *Woodwardia virginica*, *Lycopodium lucidulum*, *Asclepias incarnata*, *Phytolacca decandra* and an abundance of *Radicula* (probably *aquatica*). At the Fish Hatchery just beyond, is a huge specimen of *Platanus occidentalis*, and in the fish tanks themselves, enough for all, of *Marchantia* (sp.) in all its forms. In front of the "Haunted House" is a good specimen of *Aralia Spinosa*, the so-called "Hercules Club."

After lunching on the sand-spit a stroll along the beach revealed only a stray piece of *Uva lactuca* and *Fucus vesicularis*. While the outer side of the Spit appears to have no growth of plants, the inner border, facing the harbor, has a dense growth of *Spartina glabra*, while the more delicate *S. patens* fills the area where the sandbar joins the mainland displacing *Ammophila arenaria*,—which otherwise covers the sand. Other plants found here are *Limonium carolinianum*, *Salicornia europea*, and *Salsola Kali*.

Mrs. H. W. deForest had invited the Torrey Club to visit her garden. This was truly a "lovesome spot." The rustic gateway was hung with pink clematis, great masses of pink and white phlox filled the garden with their fragrance. Wall-flowers, pyrethrums, campanulas, and real heather bloomed against a backing of yew. Below, in a sunken area, were plantings of tea roses; to one side, in a portico, were oleanders growing in tubs. The wide lawn presented *Taxodium*, *Magnolia*, and *Carya ovata*,—and *Pachysandra* was everywhere.

Dr. Avery, of the Carnegie Institute of Washington, acting for Dr. Blakeslee exhibited and explained the breeding experiments with *Datura* which have been in progress for a number of years. Apparently in the reduction division, variations are brought about in the inheritance of the plant when the chromosomes fail to pair off in orthodox fashion; in other instances, the chromosomes which have paired, fail to separate again. By careful breeding, plants with the haploid, diploid and triploid numbers of chromosomes, and with a variety of chromosome combinations have been obtained. Our party had the opportunity of viewing an entire plantation of *Datura* all abloom and distributing a fine perfume. Dr. and Mrs. Avery entertained the group in their wild flower garden which contains over five hundred species mostly collected from Long Island. These include several rare orchids and ferns, many mints, and other prizes too numerous to recount here.

DOLORES J. FAY